

Application of Domain Adaptive Deep Learning Model for Face Recognition with Grid Search Optimization

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Abstract: *This study examined the effectiveness of domain-adaptive deep learning models in the field of face recognition with ResNet50 pre-trained architecture. The model demonstrated excellent accuracy in the manual approach, achieving 93.57%, highlighting ResNet50's intrinsic skills in feature extraction and classification tasks. Furthermore, by using Grid Search Optimization, the accuracy increased to an astounding 100%, emphasizing the significant role of hyperparameter adjustment in optimizing the model's performance. These findings highlight the potential of domain adaptation methods to improve face recognition systems and highlight Grid Search Optimization as a key strategy for achieving the accuracy levels required for real-world implementations.*

Keywords: Domain Adaptive Deep Learning, Grid Search, ResNet50, Transfer Learning

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